



California Air Resources Board
1001 I Street
Sacramento, California

April 1st 2014

RE: Comments on Proposed Rice Cultivation Offset Protocol and Updates to Existing Offset Protocols

To Whom it May Concern:

Thank you for the opportunity to comment on the proposed rice cultivation offset protocol and updates to existing offset protocols. As a project developer, which has issued over 160,000 ARBOCs from five projects and with additional projects listed pending review, Camco provides comments on updates to existing offset protocols. Camco has direct experience of the ARB Livestock Protocol ("Protocol") with one project having received a Positive Offset Verification Statement. In addition we are currently evaluating how to transition our early action offset projects to the Protocol. We provide general observations in regards to the Protocol and then specific recommendations for areas of improvement.

Our experience in working with the Protocol to date has been that accredited verifiers are reluctant to take decisions on Protocol interpretation without guidance from ARB. This creates uncertainty in regards to project development and operation – as the slightest deviation from the Protocol requires prior sign-off and reduces the role of the verifier to a "box checker" rather than recognizing their expertise in reviewing projects which have many technical components. The end result is a slow verification process, increasing cost (as time is being spent awaiting and responding to decisions from ARB rather than relying on verifier judgement) and a lack of transparency in terms of who knows what in regards to the decisions ARB has made. Not all of this can be fixed by modifying the Protocol but there are some improvements which can be made which would increase the flexibility of the Protocol and enable verifiers to use their professional judgement where the Protocol is not clear. The Protocol has been in existence since 2011 and we understand that there have been a number of queries and clarifications issued, some of which, but not all, have been included in a FAQ document. Our first recommendation is for ARB to provide details of queries received asking for clarification / guidance on how to interpret various aspects of the Protocol and the guidance which ARB has given. This guidance, which might also include variances granted under the early-action protocols, should also be part of any update. This would eliminate the need for future guidance on these items and provide certainty to OPOs/APDs in regards to historic interpretations.

Camco also believes that there will always be situations which do not precisely fit the language of the Protocol and that ARB should consider appropriate ways to review and respond to these. One suggestion would be for OPOs / APDs to submit a request for clarification / interpretation to ARB. If accepted following initial review, the request would result in the regulatory timeline for project registration being suspended while it was considered. On approval / rejection the results would be made public and, if appropriate, be included in a subsequent update of the Protocol.



ARB's March 17 presentation on Protocol update stated that *"future projects must use the updated protocols"*. Camco agrees that projects should be encouraged to use the latest protocols but asks ARB to provide a grace period of 6 months following adoption when projects could choose to use the existing or newly updated Protocol. Livestock projects take a considerable amount of time to design, permit, finance, construct and begin operation. Project financing and design considerations are based on information available at the time and any change to Protocols may significantly impact the ability of a project to generate the offsets which it was designed to achieve – for example a change to the way the baseline is determined. Allowing an adequate grace period would prevent any changes effectively becoming retroactive changes.

Monitoring

Current protocol guidance with regard to monitoring biogas flow allows for a single meter to be used for multiple, identical destruction devices, assuming that operational status is monitored. However, the protocol does not provide the flexibility for a single meter to be used for multiple non-identical devices. In this case, providing the operational status of all devices can be demonstrated, the OPO / APD should be able to use the destruction efficiency of the least efficient device to determine how much gas was destroyed. See Errata & Clarifications released by the Climate Action Reserve on 10/29/2013 for their U.S. Livestock Protocol version 3.0 Section 6.8. If one of the non-identical devices is not operational for a period of time then provided the OPO/APD can show that no gas could flow to that device and the other device was able to accept all gas, the OPO/APD should be able to claim gas was destroyed.

Similarly, many destruction devices are constructed in such a way that they do not allow biogas to pass through them if they are not recording output, e.g. boilers and generators and if they were allowing gas to pass through undestroyed would be in breach of environmental and health and safety regulations. Where gas is flowing to a generator and the generator is not showing a kWh output then providing the verifier can be reasonably assured that the generator was operating (by, for example, operator maintenance records, combined power records etc..) then the biogas should be deemed to be destroyed.

In addition to revising protocol language to bolster verifiers' ability to exercise professional judgement, we believe that the guidance would benefit from revisions that allow site-specific values to be used. The use of site-specific values in emission reduction calculations provides a more accurate representation of project characteristics and lends a more dynamic approach to calculations. For example, the destruction efficiency of the engine may be based on the results of stack testing events that are already required by the state and performed by a third-party testing provider that is recognized by the state air permitting division. To estimate project methane emissions from an effluent pond, OPOs and APDs should be allowed to use actual site specific measurements to incentivize activities to reduce effluent pond emissions. Currently it is uncertain whether this is permitted.

Data Substitution

In Camco's experience meter outages on generators can result in a loss of biogas flow data but not records of methane concentrations and power output. Currently, the data substitution methodology does not permit data substitution if an outage is greater than one week. In many cases it is not possible to diagnose a meter problem and get a new meter configured, shipped



and installed within the space of a week especially if the outage falls on a weekend. (Camco has experienced instances of substitute meters being shipped with the wrong configuration resulting in extended outages which are through no fault of the digester operator). The ARB methodology requires OPOs/APDs to use previous flow information as a basis for missing data. In the case of a generator, the kWh output of the generator provides the best proxy for determining how much gas was flowing to the engine, especially where generator settings (i.e. the methane concentration) and the historic performance of the generator are taken into account. Camco sees no reason why ARB could not permit OPOs/APDs to estimate gas flows using kWh output data based upon historical generator performance for an extended period of time.

Digester Venting Events

Digesters may need to be periodically cleaned out for a variety of reasons. The Protocol provides little flexibility for OPOs/APDs to account for this. For example, equation 5.7 Project Methane Emissions from Venting Events include two components: the volume of biogas contained within digester headspace and the total volume of biogas vented from the digester for a specified duration of time. This equation cannot be applied in its current form to a cleanout event where manure bypasses the digester for a period of time and the cleanout is closely managed. In this case, the cleanout may take around 30 days but gas is drawn off in advance and very little manure remains in the digester (and is not heated for the full period). To penalize owners by requiring them to account for the a % of average gas flow for the full cleanout period is not representative and could lead to perverse outcomes where the owner deliberately reduces gas flow for 7 days prior to the clean out to avoid being penalized.

Destruction Devices

Camco would like ARB to consider the conversion of biogas to liquids as an eligible destruction activity in a similar way as conversion of biogas to pipeline gas or CNG is an eligible destruction activity. (Currently there is no default destruction efficiency provided for conversion of biogas-to-liquids).

We would welcome the opportunity to have further dialogue with ARB staff to discuss these comments and the improvements we suggest.

Yours sincerely,

A handwritten signature in black ink, appearing to read "CP", is written over a light blue horizontal line.

Charles Purshouse
Vice President – Carbon Services